



CLAIMS AS ALLOWED IN SERIAL NO. 09/766,529

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TC 2800 MAIL ROOM

(amended) A micromirror optical switch, comprising:

a plurality of micromirrors;

at least one of said mirrors suspended from a support structure by a plurality of flexible couplings configured for allowing said at least one of said mirrors to tilt;

said optical switch configured for separating at least one wavelength component in an optical beam from at least one other wavelength component of said optical beam;

said optical switch configured for independently switching said at least one wavelength component from at least one input port to at least one output port.

32. (amended) An optical switch as recited in claim 31, wherein said at least one of said mirrors is micromachined from silicon.

33. (amended) An optical switch as recited in claim 31, wherein tilt of said at least one of said mirrors is controlled by application of a controlled electrostatic field to said at least one of said mirrors.

34. (amended) An optical switch as recited in claim 31, wherein tilt of said at least one of said mirrors is electrically actuated.

35. (amended) A micromirror optical switch, comprising:

- a plurality of micromirrors;
- at least one of said mirrors having first and second flexible couplings;
- first and second support structures;
- a first flexible coupling extending between said first support structure and said at least one of said mirrors; and
- a second flexible coupling extending between said second support structure and said at least one of said mirrors;

said optical switch configured for separating at least one wavelength component in an optical beam from at least one other wavelength component of said optical beam;

said optical switch configured for independently switching said at least one wavelength component from at least one input port to at least one output port.

36. (amended) An optical switch as recited in claim 35, wherein said at least one of said mirrors is micromachined from silicon.

37. (amended) An optical switch as recited in claim 35, wherein said at least one of said mirrors is tiltable in relation to said support structures.

38. (amended) An optical switch as recited in claim 37, wherein tilt of said at least one of said mirrors is controlled by application of a controlled electrostatic field to said at least one of said mirrors.

39. (amended) An optical switch as recited in claim 37, wherein tilt of said at least one of said mirrors is electrically actuated.

40. (amended) An optical switching array, comprising:  
a plurality of micromirrors suspended from a support structure by a plurality of corresponding flexible couplings configured for allowing said mirrors to tilt;  
said optical switching array configured for separating at least one wavelength component in an optical beam from at least one other wavelength component of said optical beam;  
said optical switching array configured for independently switching said at least one wavelength component from at least one input port to at least one output port.

41. An optical switching array as recited in claim 40, wherein said mirrors are micromachined from silicon.

42. An optical switching array as recited in claim 40, wherein tilt of each said mirrors is controlled by application of a controlled electrostatic field to said mirror.

43. An optical switching array as recited in claim 40, wherein mirror tilt is electrically actuated.

44. (amended) An optical switching array, comprising:

- a plurality of micromirrors;
- each said micromirror having a first support structure and a second support structure;
- each said micromirror suspended by a flexible coupling extending between said mirror and said first support structure and suspended by a flexible coupling extending between said second support structure and said mirror;
- said optical switching array configured for separating at least one wavelength component in an optical beam from at least one other wavelength component of said optical beam;
- said optical switching configured for independently switching said at least one wavelength component from at least one input port to at least one output port.

45. An optical switching array as recited in claim 44, wherein each said mirror is micromachined from silicon.

46. An optical switching array as recited in claim 44, wherein each said mirror is tiltable in relation to said support structure suspending said mirror.

47. An optical switching array as recited in claim 46, wherein tilt of each said mirror is controlled by application of a controlled electrostatic field to said mirror.

48. An optical switching array as recited in claim 46, wherein mirror tilt is electrically actuated.